

CALLOWAY HIGH-EFFICIENCY COLLECTOR CIRCUIT

from KeelyNet © 2000

BUILD THIS AT YOUR OWN RISK!

This circuit is a design used by Robert Calloway, based on John Bedini's over-unity motor and energy collection experiments posted on his website, www.icehouse.net/john1.

Here is the redrawn circuit that Robert so kindly shared. He indicates it will allow collection of sufficient energy from a rotating magnet arrangement as to provide one watt of excess energy above and beyond what it takes to recharge the battery.

If you choose to experiment with such devices and wish to share your findings, advice or any anomalies, please direct your comments to Robert Calloway or to Jerry Decker so they can be posted and archived publicly in the KeelyNet Interact discussion list. It's only when we share that everyone learns.

The following circuit had an error when I first posted it on 9 August 2000, which was

caught by Ken Carrigan. The circuit has now been corrected; thanks Ken.

The battery is a 9-volt DC transistor battery. Coil construction and other details can be found in the report on the 10-year-old girl's science fair project below [also see Bedini article, Science News, NEXUS 7/04]. I will integrate as much as I can into this file as information is provided.

The S1 switch gives you the option of whether or not you want to recharge the battery. I'm not sure why you would want to do that, other than to *drain* a fully charged battery by seeing how long the motor would run without recharging. Replace the battery with a new one, and then switch the charging circuit on and see how much longer the motor runs *with recharging*.

In the case of Bedini's 10-year-old girl who won the science fair with her version of his motor, with recharging the motor reportedly ran at 4,000 rpm for five days, and the 9-volt transistor battery was still fully charged when they shut it down at the end of the science fair. That is, to say the

least, *highly efficient*.

Note: you will have to experiment with the number of magnets and coils as well as their placement to achieve the best operation.

Jerry Decker, KeelyNet, 9 August 2000

Robert Calloway's comments

9 August 2000, 6.46 pm

Hello, Jerry: I see nothing wrong with the circuit; a job well done! The single diode is the 6-amp blocking type. Probably an overkill, but I got it at work. The bridge is a 400-volt at 2 amps. The coils are 370 turns of #19 magnetic wire. The cores are very important.

For the fellow just starting out for an easy-put-together motor, use 5/16 mild steel bolts by 2 inches long. Check these bolts with a magnet; make sure they do not retain magnetism. Wrap the shoulder of the bolt with one layer of electrical tape.

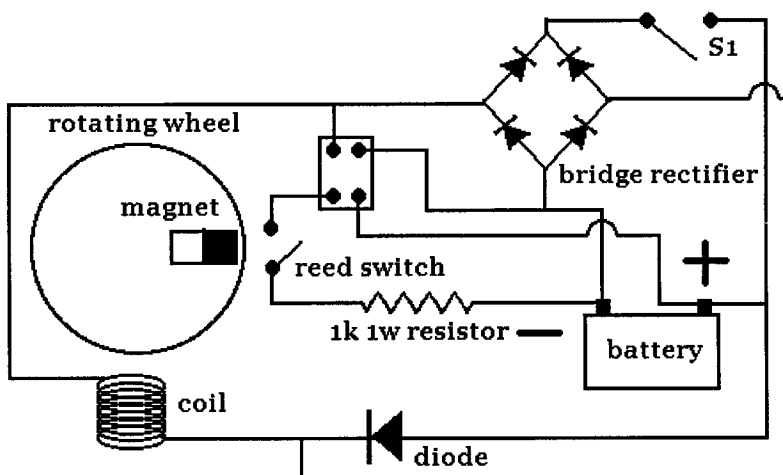
Find some leftover plexiglass somewhere and take a 2-inch hole saw and cut out two plugs per coil. Slide one of the plugs onto the bolt to the head, then slide the other one onto the shoulder of the bolt. Having the shoulder of the bolt wrapped to protect the wire, start winding.

Make sure you wind both coils in the same direction. The resistance in the coil is about 0.6 to 0.7 ohms. The threaded portion of the now-made coil can be used for easy mounting.

For the serious builder, use mild steel filings mixed with epoxy for the cores. This must be a heavy mix of metal with the epoxy. A plastic spool with about a 5/16 hollow centre works well with this application.

Jerry, I will attach a picture to this message which will help anyone get the idea of how to build this motor. However, it is my first prototype. Different coils and timing were used then. This picture is not what I use now, but it may help—your choice.

I am also concerned with folks that are trying to build a motor and really don't know a lot about circuits or using plain common sense. Please, put in a clause that says "Build at your own risk!" or something to that effect. I have had several



reed switch is normally open
 solid state (3-33vdc) relay is normally open RLYB1210D Phillips
 1kohm 1watt resistor protects reed relay
 S1 on/off switch is optional

coil and reed switch positions must be adjusted for best results

phone calls and e-mails that verify that...

I also recommend the air gap between the magnet and stator coils be no closer than 5/32 starting out, for safety. Get timing adjusted, get used to the motor, then play with the air gap. This motor can do some strange things with a close air gap.

I now place the reed switch down on the base of the motor and let the rotor magnets activate it. This does away with the complicated timing stuff on the end of the shaft. When I get the funds together, my dream is to build a 16-pole motor that uses 8 stator coils. It will be a twin-disc rotor that utilises both ends of the stator coils.

Almost forgot. Keep the pulses short from the reed switch. One can move the reed switch around on the base to achieve this. If you have got the pulses as short as you can get and need them shorter, place a piece of thin iron between the reed and the magnets. Remember, if your pulses are a fraction too long, this is wasted energy.

You can also add two extra magnets to the rotor for more power to the rotor shaft; place them 90 degrees apart. Remember, that poor reed switch will be working four times per revolution then. The two stator coils should be hooked up in parallel, but it will work hooked up in series.

Regards, Robert

Robert Calloway's comments 9 August 2000, 8.49 pm

Hello, Jerry: I forgot one very important thing: the rotor flywheel. Mine is a 7-1/4-inch grinding disc rated for 8,400 rpm. The weight is 7 lbs with the magnets glued to it. Do not use field coils on the rim to collect current! This is a *big no-no*.

The flywheel effect must be used with this design. Use the rotor shaft to drive a generator instead. A 5/8 all thread shaft will screw right through the grinding disc with a nut to lock it in place. Then it is very easy to adjust magnet to stator gap with this set-up.

Robert

Robert Calloway's comments 10 August 2000, 5.40 pm

Hello, Jerry: Sorry for all the confusion. The motor is not a Bedini design. It is based on the principles of his design and the Adams design. It is also a 12-volt system using a 4 ah (amp hour) gel cel battery.

Robert

(Source: KeelyNet, www.keelynet.com/bedmot/callow1.htm)

A NEW THEORY OF GRAVITY A Brief Introduction

by David W. Allan © 2000

Physicists have already brought most of the forces of nature into a single underlying theory. The ultimate theory will incorporate gravity as well.

— Steven Weinberg

Time, 10 April 2000, p. 86

One of the biggest questions that has puzzled mankind throughout the ages is how gravity works. This new gravitational theory not only explains how gravity works, but shows how errors can arise in determining the positions of space probes, in determining the mass of the Earth and other planets and in determining the value of G , the universal gravitational constant.

This new theory of gravity is part of a more general Unified Field Theory (UFT) that shows how all of the known force-fields work together. Once understood, this new UFT explains several heretofore unexplained phenomena in nature. In this brief write-up, we will only deal with the gravitational part of the UFT.

John Anderson and colleagues of NASA JPL, experts in the determination of spacecraft positioning, have published discrepancies observed in the locations of *Pioneer 10*, *Pioneer 11* and the *Ulysses* solar probe (Anderson, 1998; Katz, 1999; Murphy, 1999). To date, these discrepancies have not been fully explained. Anderson has raised the question as to whether there is a fundamental problem in our understanding of gravity or in the timing provided by the atomic clocks as part of the Deep Space Network (DSN) which tracks the space probes. The space vehicles exhibit a pull toward the Sun, greater than current theory would predict by about $2e^{-8}$ cm/s².

The general model now being used to describe the gravitational field proposes that gravitational waves run transverse to the direction of propagation of the gravitational energy. As predicted by Einstein, gravitational energy would travel at the velocity of light. To date, no experiments have been able to measure gravitational waves directly or even detect them; but, from the interaction of the gravitational forces between a binary pulsar pair, Prof. Joseph Taylor (Princeton University) was able to deduce Einstein's prediction that the gravitational energy travels at the velocity of light (Taylor, 1994).

Currently, many hundreds of millions of dollars have been spent, and hundreds of millions are now being sought, by an international university and investigative consortium in order to continue their research into gravity waves and to unravel the mysteries of gravity.

It is our hope and belief that our work will bring further enlightenment to this challenge and provide the necessary, but different, perspective needed to understand gravity.

The most significant aspect of this new theory is the discovery of *diallel, gravitational-field lines*. These diallel lines open up a whole new paradigm and help to explain several heretofore unexplainable problems in physics. With a new perspective, we need some new physics. Papers are in preparation for publication to explain some of this new physics, and some information is available on our website, www.allanstime.com.

In this new theory, two things are required for gravity to work. Firstly, two bodies of some *energy density* to interact with each other; and secondly, connecting diallel lines, which provide not only particle flow between the bodies but also the flow of photon and gravitational information.

In chemistry and molecular spectroscopy, we take for granted the seven electron shells that describe the energy states of electrons in their various atomic and molecular configurations. These seven shells, along with the number of protons, neutrons and electrons, give us all of our elements and isotopes of which we are aware. As these seven shells include all the electrons' configurations around an atom or molecule, similarly *there are seven channels or states of conductivity for the diallel lines* included in the new theory of gravity and in the UFT. *These diallel lines are made of the same matter, and can serve as a conduit for any and all of the fundamental particles as well as for photons.*

The diallel lines are the conduits for the gravity information as well, bringing about the interaction between the two bodies. Just as a magnetic field requires no particles to make the field, so there is no graviton required to make a gravity field. In the same way that a moving charge sets up a condition for the generation of a magnetic field, a certain set of conditions will generate a gravitational field. The minimum conditions require two bodies, each with some level of energy density, together with

a flow of charged particles along the diallel lines connecting these two bodies. The moving charges and particles in the diallel lines set up the necessary conditions for the gravitational information to flow between the two bodies providing the gravitational interaction. The velocity of the gravitational information is a function of the conditions—typically, at or faster than the velocity of light.

The frequency of this gravitational information is located in a band just above that of the cosmic rays that are associated with particle annihilation and generation. Like light, the velocity of gravity information is dependent on local circumstances.

In the same manner that photons are associated with quantum transitions and all particles exist (interactively) in quantum states, the diallel lines have quantum states in which both particles and gravitational information travel. As particles and photons can be absorbed, refracted or reflected, so can diallel lines when given the right local circumstances.

A classic illustration of the refraction or bending of these diallel lines was determined by a team from the University of Alaska who observed the bending of electron flow above extremely energetic thunderstorm activities.

As will be seen below, the equations of state describing the fields for diallel lines contain the possibility for sign reversal, i.e., antigravity or gravitational shielding.

Some additional perspectives are useful to appreciate aspects of the new physics needed for this new theory. We have long established in quantum physics the dual nature of matter: a particle can behave like a wave. Similarly, a photon, which is basically an electromagnetic bundle of energy oscillating at a particular frequency, can also behave as a particle. The electromagnetic field associated with a photon has no charge, and its energy is proportional to its frequency. The gravitational information cannot be considered as a particle or a bundle of energy *per se*. Operating above the cosmic frequency band, this gravitational information is communicated in a way not heretofore appreciated. We cannot write $E = h\nu$ to describe its energy, and we need a new set of equations associated with this flow of information.

In summary, then, the conditions needed for the gravitational field are two objects with some energy density (not just mass) and with diallel lines running between these two energy-density objects—which

diallel lines are conducting particles, i.e., electrons, protons, neutrons, etc. These diallel lines then provide a conduit for the gravitational band of frequencies to communicate and generate a gravitational interaction between the two objects. Much like our circulatory and respiratory systems breathe and pulse to sustain life, so these diallel lines are the communication channels to provide (in analogy with breath and pulse) a balance and harmony and the function of nature.

The traditional gravitational equation is:

$$F = G \frac{m_1 m_2}{r_{12}^2}$$

The product of the masses is divided by the distance between them squared, and G is the well-known constant of proportionality, the universal gravitational constant. According to this equation, the acceleration of gravity that we feel on the Earth is given by Gm_1/r_{12}^2 ($= 9.8 \text{ m/s}^2$ nominally at the surface of the Earth), if m_1 is the mass of the Earth and m_2 is the mass of the person feeling the acceleration. What we feel when standing is nominally this force, since we are constrained to walk about on the Earth. If the material surface of the Earth were not constraining us, we would then free-fall, accelerating toward the centre of mass of the Earth.

Given the new theory, the attraction is a function of the energy density, which, of course, includes the mass. The above traditional equation is a subset of the new. The *new equation* for gravitational force replaces the masses by the integral over the density, and is as follows:

$$F = \frac{1}{c^2 G r_{12}^2} \int_{V_1}^{V_1+1} E_1 / \Omega_1 dV \int_{V_2}^{V_2+1} E_2 / \Omega_2 dV$$

It is fascinating that at CU, where they have created new matter called Bose-Einstein condensate, the velocity of light in this condensate can be almost as slow as the velocity of sound. It would be instructive to perform diallel line experiments in conjunction with B-E condensate matter. This high-density material could lead to some interesting validations of this new UFT due to the higher energy densities present.

The work of Dr Ning Li at the University of Alabama at Huntsville is particularly fascinating also, as she is doing high-frequency work with superconductors and investigating the quantum states associated with the gravity fields. She has not yet

published her full theory, and her work appears to be among the most promising (see references below).

As the electrons travel along diallel lines, they spin clockwise in a variety of quantum states. Antigravity comes as a result of spinning the electrons in the opposite direction. This is like and in conjunction with the creation of antimatter. By so doing, one gets a negative sign from the A_2 term in the above equation; for example, creating an upward rather than a downward force. This is somewhat analogous to a magnetic field being used to suspend objects.

Papers are available on the UFT, and both validating experiments and theory for the above gravitational interaction are available. These papers may be obtained by request. Several experiments are planned and some now are being prepared.

Bibliography

- Anderson, J. et al., *Physical Review Letters* 81(14), 5 October 1998.
- Katz, J.I., *Physical Review Letters* 83(9), 30 August 1999.
- Murphy, E.M., *Physical Review Letters* 83(9), 30 August 1999.
- Taylor, J., "Binary Pulsars and Relativistic Gravity", *Reviews of Modern Physics* 66:711, 1994 (Nobel Prize).

Related Papers

- Li, Ning and D.G. Torr, *Physical Review* 43D:457, 1991.
- Li, Ning and D.G. Torr, *Physical Review* 46B:5489, 1992.
- Li, Ning and D.G. Torr, *Bulletin of American Physical Society* 37:948, 1992.
- Podkletnov, E. and R. Nieminen, *Physica C* 203:441, 1992.
- Torr, D.G. and Ning Li, *Found. Physics Letters* 37:948, 1993.

Related Websites

- Gravity.org, a website presenting various scientific findings regarding gravity alteration.
- The University of Alaska has several papers on "red sprites" and "blue jets" at website <http://sprite.gi.alaska.edu/>.

Editor's Note:

This article was downloaded from David W. Allan's website, <http://www.allanstime.com>, Allan's Time Interval Metrology Enterprises, PO Box 66, Fountain Green, Utah 84642, USA, fax +1 (435) 835 1625.